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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/764,020	01/23/2004	Colin G. Hodge	OM148	8955

26009 7590 09/24/2007  
ROGER M. RATHBUN  
13 MARGARITA COURT  
HILTON HEAD ISLAND, SC 29926

EXAMINER
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HALL, DEANNA K

ART UNIT	PAPER NUMBER
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3767

MAIL DATE	DELIVERY MODE
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09/24/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/764,020

Applicant(s)

HODGE ET AL.

Examiner

Deanna K. Hall

Art Unit

3767

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 23 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 January 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☒ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date May 3, 2004, May 31, 2005.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_.

## **DETAILED ACTION**

### ***Information Disclosure Statement***

1. The information disclosure statements (IDS) submitted on May 31, 2005 and May 3, 2004 are in compliance with the provisions of 37 CFR 1.97(b). Accordingly, the IDSs are being considered by the Examiner.

### ***Oath/Declaration***

2. The oath or declaration is defective. A new oath or declaration in compliance with 37 CFR 1.67(a) identifying this application by application number and filing date is required. See MPEP §§ 602.01 and 602.02.

The oath or declaration is defective because:

It does not state that the person making the oath or declaration acknowledges the duty to disclose to the Office all information known to the person to be **material to patentability** as defined in **37 CFR 1.56**.

### ***Claim Rejections - 35 USC § 102***

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. **Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Cranage (US 3,965,903).** Cranage discloses a protective device for a medical suction system comprising:

A housing having an inlet and outlet, an actuator mechanism 37 having opposed blocking surfaces 52, 56, the actuator mechanism 37 movable between a contracted position Figs. 2 and 7, C4 L62-68 and an expanded position Fig. 1, a latch mechanism 61 adapted to sense the presence of a liquid to move the actuator mechanism from the contracted position to the expanded position.

***Claim Rejections - 35 USC § 103***

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. **Claims 2-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cranage in view of Haller et al. (US 7,070,577) ("Haller").**

Cranage discloses the invention as substantially claimed (see above). However, Cranage does not directly disclose the latch mechanism being operable by a shape-metal alloy wire. Haller, in the analogous art, teaches the assembly of a shape-metal alloy 41 latch mechanism C6 L18-67. The latch mechanism of Haller teaches at least two moveable latch members 42, 52 interfitted into corresponding fixed latch members 43 with the shape-metal alloy wire affixed between the movable latch members Figs.

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3A, 3B. The shape-metal alloy wire 41 contracts inwardly by an electrical discharge to release the engagement of the movable and fixed latch members C6 L57-63. The electrical circuit that activates the shape-metal alloy wire is battery powered C5 L9-16. Therefore, it would have been obvious to a person having ordinary skill in the art at the time of the invention to have modified the device of Cranage with the shape-metal alloy latch mechanism as taught by Haller for moving the membranes in a suction system.

**7. Claims 6-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cranage in view of Bargman (US 4,445,457).**

Cranage discloses the invention as substantially claimed (see above). However, Cranage does not directly disclose the actuator mechanism including a brightly colored diaphragm to act as a visual indicator when the actuator mechanism is in its expanded position. Bargman, in the analogous art, teaches a colored diaphragm to act as an indicator upon development of a predetermined pressure differential, see summary of invention. Therefore, it would have been obvious to a person having ordinary skill in the art at the time of the invention to have modified the device of Cranage with the brightly colored diaphragm of Bargman to indicate to a user when suction has been blocked.

**8. Claims 8-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cranage in view of Haller, further in view of Ujhelyi et al. (US 7,186,247) ("Ujhelyi").**

The combination of Cranage and Haller discloses the invention as substantially claimed (see above). However, the combination does not directly disclose sensing electrodes on the opposite external surface of the actuator mechanism to release the latch mechanism. Ujhelyi, in the analogous art, teaches sensing electrodes to operate the latch mechanism C6 L11-31, 48-55. Therefore, it would have been obvious to a person having ordinary skill in the art at the time of the invention to have modified the device of Cranage/Haller with the sensing electrodes as taught by Ujhelyi for controlling the opening and closing of the inlet.

**9. Claims 10-11 and 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Verkaart et al. (US 6,342,048) ("Verkaart") in view of Cranage (US 3,965,903).**

Verkaart discloses a source of vacuum Fig. 2, a patient circuit including a vacuum regulator C2 L1-4, and a protective device 12 located in the patient circuit 31 intermediate the vacuum regulator and a patient, see Fig. 2. As shown in Fig. 2, the protective device is affixed to the vacuum regulator 31. Verkaart further discloses sensing the presence of a liquid in the housing and thus activating the protective device C4 L32-42. Although Verkaart does disclose a protective device, Cranage better details the structure of the protective device. Cranage, in the analogous art, teaches a protective device having a housing having an inlet and outlet, an actuator mechanism 37 having opposed blocking surfaces 52, 56, the actuator mechanism 37 movable between a contracted position Figs. 2 and 7, C4 L62-68 and an expanded position Fig. 1, a latch mechanism 61 adapted to sense the presence of a liquid to move the actuator

mechanism from the contracted position to the expanded position. Therefore, it would have been obvious to a person having ordinary skill in the art at the time of the invention to have modified the device of Verkaart with the protective device as taught by Cranage for terminating communication between a patient and the source of vacuum.

**10. Claims 12-15 and 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Verkaart in view of Cranage further in view of Haller et al. (US 7,070,577) ("Haller").**

Verkaart/Cranage discloses the invention as substantially claimed (see above). However, this combination does not directly disclose the latch mechanism being operable by a shape-metal alloy wire. Haller, in the analogous art, teaches the assembly of a shape-metal alloy latch mechanism C6 L18-67. The latch mechanism of Haller teaches at least two moveable latch members 42, 52 interfitted into corresponding fixed latch members 43 with the shape-metal alloy wire affixed between the movable latch members Figs. 3A, 3B. The shape-metal alloy wire 41 contracts inwardly by an electrical discharge to release the engagement of the movable and fixed latch members C6 L57-63. The electrical circuit that activates the shape-metal alloy wire is battery powered C5 L9-16. Therefore, it would have been obvious to a person having ordinary skill in the art at the time of the invention to have modified the device of Verkaart/Cranage with the shape-metal alloy latch mechanism as taught by Haller for moving the membranes in a suction system.

**11. Claims 16 and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Verkaart in view of Cranage further in view of Bargman.**

Verkaart/Cranage discloses the invention as substantially claimed (see above). However, this combination does not directly disclose the actuator mechanism including a visual indicator when the actuator mechanism is in its expanded position. Bargman, in the analogous art, teaches a colored diaphragm to act as an indicator upon development of a predetermined pressure differential, see summary of invention. Therefore, it would have been obvious to a person having ordinary skill in the art at the time of the invention to have modified the device of Verkaart/Cranage with the visual indicator of Bargman to indicate to a user when suction has been blocked.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Deanna K. Hall whose telephone number is 571-272-2819. The examiner can normally be reached on M-F 8:00am-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, LoAn Thanh can be reached on 571-272-4966. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.



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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Deanna K. Hall  
Examiner  
AU 3767

dkh



LOAN H. THANH  
PRIMARY EXAMINER